

Product Information

Controller

**Plug-In Controller /
 Display
 GRA ... VO**



- Self-supplying plug-in display / controller
- Extreme fast controlling and monitoring
- Programmable switching outputs

Characteristic

The GRA 0420 VO and GRA 010 VO are microprocessor-controlled displaying, monitoring and controlling devices for universal use.

The devices have an input for standard signal 4..20 mA (GRA 0420 VO) or 0..10 V (GRA 010 VO). The connection is done by simply plug-in a special plug design for elbow-type plug according to EN 175301-803/A to a transmitter.

They provide a switching output (NPN output) that can be configured as 2-point controller or min/max alarm. The output state is indicated by an additional LED below the left side of the 7-segment display.

The GRA ... identifies impermissible operating states like display or system errors and displays a corresponding error code.

Technical data

Measuring inputs

	GRA 0420 VO	GRA 010 VO
Input signal	4..20 mA (2-wire)	0..10 V (3-wire)
Voltage load	< 5.5 V	---
Input resistance	---	30 Ohm
Power supply	self-supplying	12..28 V / < 10 mA

Switching outputs

	GRA 0420 VO	GRA 010 VO
Switching outputs	1x electrically isolated open-collector switching output test voltage: 50V	1x open-collector switching output, "supply +" switching

Display

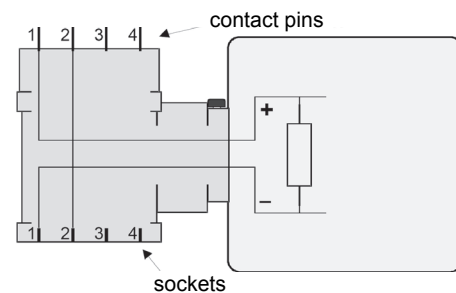
Display : red LED display
 Height : 7 mm
 Display range : -1999..+9999 digit
 initial / final value and decimal point
 freely adjustable

Accuracy : < 0.2 % FS ±1digit
 Measuring rate : 50 measurements / second
 Operation : via 3 buttons
 Working temperature : -25..+50 °C
 Electric connection : special plug design for elbow-type plug
 (EN 175301-803/A) for easy plug-in
 Protection class : front IP65

Dimensions

Housing : ABS; front screen: polycarbonate;
 membrane keypad
 Size : 48.5 x 48.5 x 35.5 mm (L x W x D)
 without elbow-type plug
 50.5 x 90 x 39.5 mm (L x W x D)
 with elbow-type plug

Connection diagram



GRA 0420 VO

Contact pin 2 is directly connected to the socket. The GRA 0420 VO is between contact pin 1 (+) and socket 1 (-). Contact pins 3 and 4 are used for the switching output.

GRA 010 VO

Contact pins 1, 3 and 4 are directly connected to the corresponding sockets. The GRA 010 VO is connected to contact 1 (signal +), contact 3 (supply +) and contact 4 (GND / signal -). The contact pin 2 is used for the switching output ("supply +"-switching).


Design types

GRA 0420 VO	Self-supplying plug-in controller / display special adapter design for elbow-type plug (EN 175301-803/A) for easy plug-in, output: 4..20 mA, with 1 electrically isolated switching output
GRA 010 VO	Plug-in controller / display special adapter design for elbow-type plug (EN 175301-803/A) for easy plug-in, output: 0..10 V, with 1 "+Ub"-switching output

continued on next page

Product Information

Controller

<p>GRA 0420 WK</p>	<p>Controller / display with cable connection approx. 2m long connection cable with loose ends for connecting to any standard signal source and for switching output; housing with mounting holes, can be directly mounted to any surface;</p> <p>output 4..20 mA; with 1 electrically isolated switching output</p>	
<p>GRA 010 WK</p>	<p>Controller / display with cable connection approx. 2m long connection cable with loose ends for connecting to any standard signal source and for switching output; housing with mounting holes, can be directly mounted to any surface; output: 0..10 V; with 1 "+Ub"-switching output</p>	

Options

<p>S2</p>	<p>2 electrically isolated switching outputs, outputs with increased switching power, connection via separate M8 socket</p>
<p>OT</p>	<p>Cover without buttons e.g. if the adjustment of the device should not be directly accessible for the user</p>

Ordering code

1. 2. 3.
 GRA - -

1. Input signal type	
0420	4..20 mA (standard)
010	0..10 V
2. Connection type	
VO	elbow-type plug (standard)
WK	cable connection
3. Option (combination of multiple options upon request)	
00	without option
S2	2 electrically isolated switching outputs
OT	cover without buttons